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FACSIMILE COVER SHEET

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DATE: November 3, 2008

TO: Examiner Edward M. Johnson
Group Art Unit 1754

PHONE #: 571-272-1352
FAX #: 571-273-8300

Application No.: 09/757,519 OUR REF.: 3132.07US02
Applicant: Horne et al.
Due Date: November 16, 2008

FROM: Elizabeth Q. Shipsides
PHONE #: 612.605.1045

Attached is the following for filing in the above-identified application.

(1) Appeal Brief Transmittal (1 page);
(2) Appeal Brief (26 pages);
(3) Claims Appendix (4 pages);
(4) Evidence Appendix with Three Patents (24 pages); and
(5) Related Proceedings Appendix with Decision (8 pages).

Respectfully submitted,

Elizabeth Q. Shipsides
Registration No. 57,529

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being transmitted by facsimile to the U.S. Patent and Trademark Office, Fax No. 571-273-8300 on the date shown below.

November 3, 2008
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Attorney Docket No. 3132.07US02

APPEAL BRIEF TRANSMITTAL

In re the application of:

	Horne et al.	Confirmation No.: 3132.07US02
Application No.:	09/757,519	Examiner: Johnson, Edward M.
Filed:	January 9, 2001	Group Art Unit: 1754
For:	METAL VANADIUM OXIDE PARTICLES	

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Transmitted herewith, is the Appeal Brief in the above-identified application, with respect to the Fourth Notification of Non-Complaint Appeal Brief mailed October16, 2008.

Applicants previously paid $250 for the filing of an Appeal Brief in this matter on August 20, 2003. Applicants believe that no additional fees are due, but please charge the below deposit account if that assessment is in error to ensure entry of this Brief.

Respectfully submitted,

Elizabeth Q. Shipsides
Registration No. 57,529

Please grant any extension of time necessary for entry; charge any fee due to Deposit Account No. 50-3863.

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November 3, 2008
Date

Elizabeth Q. Shipsides

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:	Attorney Docket No.: 3132.07US02
Horne et al.	Confirmation No.: 8679
Application No.: 09/757,519	Examiner: Edward M. Johnson
Filed: January 9, 2001	Group Art Unit: 1754

For: METAL VANADIUM OXIDE PARTICLES

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES
SECOND CORRECTED APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

INTRODUCTORY COMMENTS

This is an appeal from an Office Action dated July 16, 2007, in which claims 1-3, 10, 17-22, and 24-29 were finally rejected. The rejection of claims 1-3, 10, 17-22, and 24-29 are hereby appealed. A Notice of Appeal was filed on August 7, 2007. A fourth Notice of Non-Compliant Amendment was mailed October 16, 2008. This fourth Corrected Appeal Brief is timely filed in response to the Notice of Non-Compliant Brief of October 16, 2008. Please note that the Evidence Appendix coversheet includes a statement setting forth where in the record that the evidence was entered by the Examiner.

Please grant any extension of time necessary for entry; charge any fee due to Deposit Account No. 50-3863.

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being transmitted by facsimile to the U.S. Patent and Trademark Office, Fax No. 571-273-8300 on the date shown below.

November 3, 2008
Date

Elizabeth Q. Shipsides

REAL PARTY IN INTEREST

Greatbatch, Ltd. (previously known as Wilson Greatbatch Technologies, Inc.), has acquired the entire right, title and interest in and to the invention, the application, and any and all patents to be obtained therefore. Greatbatch was assigned the patent application by NanoGram Corporation, a corporation organized under the laws of the state of Delaware, and having offices at 165 Topaz St., Milpitas, California. On June 17, 2004, an assignment was executed transferring ownership from NanoGram Corporation to Wilson Greatbatch Technologies, Inc. recorded at reel 015552, frame 0199, although NanoGram Corp. may have retained certain licensed rights The rights in the patent application were transferred to NanoGram Corp. as per the Assignment, recorded at Reel 011451, Frame 0570 from the inventors to NeoPhotonics Corporation and an assignment from NeoPhotonics Corporation to NanoGram Corporation recorded at Reel 013957, Frame 0076. Note that NeoPhotonics Corporation was formerly called NanoGram Corporation, and the present NanoGram Corporation is an independent corporation spun out from NeoPhotonics Corp.

RELATED APPEALS AND INTERFERENCES

U.S. Patent application 09/606,884 was appealed to the USPTO Board of Patent Appeals and Interferences. This application has now issued as U.S. Patent 7,214,446. This patent is assigned to NanoGram Corporation. A copy of the decision is attached. It is noted that the decision reversed the rejection.

STATUS OF CLAIMS

Claims 1-3, 6-18 and 22-29 are pending. Claims 4, 5 and 19-21 have been cancelled. Claims 1-3, 10, 17, 22, and 24-29 stand rejected. **The rejection of claims 1-3, 10, 17, 22 and 24-29 is presently appealed.** Claims 6-9, 11-16, 18, and 23 are free of any rejections and are objected to for depending on a rejected base claim.

In multiple Office Actions from December 28, 2001 through January 27, 2003, Examiner indicated that claims 11-16 and 18 contained allowable subject matter. After Applicant filed a Notice of Appeal and multiple Appeal Briefs beginning on August 20, 2003, Examiner issued a non-final Office Action dated February 7, 2007 without considering pending claims 11-16 and 18. Applicant notes that the Patent Office lost an initially filed Appeal Brief and significant delay resulted. The Office Action of February 7, 2007 had an error with respect to dropping claims 11-16 and 18 from the application. Applicant inadvertently propagated this error in a Response filed on May 11, 2007. Applicant maintains that these claims were never canceled and remain pending and allowable.

The appealed claims are listed in the Claims Appendix.

STATUS OF AMENDMENTS

All Amendments have been entered with the filing of the Appeal. No after-final amendments were submitted.

SUMMARY OF CLAIMED SUBJECT MATTER

The invention relates to powders, i.e., collections of particles, having a composition of a metal vanadium oxide. (See, for example, the abstract.) Metal vanadium oxides have a non-vanadium metal ion along with a vanadium ion within an oxide composition. (Specification, for example, page 4, lines 10-23.) The claimed composite metal oxide particles have an average particle size less than a micron. (Specification, for example, page 5, lines 1-18. Figs. 11 and 12, for example.)

Any particular powder has particles that can be characterized by size. A collection of particles has an average particle size and a distribution of particle sizes, which are related but separate properties. The distribution of particle sizes relate to the size uniformity of the particles.

Some of the pending claims specify particular distributions corresponding to highly uniform particles. (Specification, for example, page 31, lines 3-26. Fig. 12, for example. Claim group 4.) All of the claims directed to particle collections have a submicron average particle size. (Specification, for example, page 30, lines 1-19. Figs. 11, 12, 15, and 16, for example. Independent claim 1. Claim group 1.) In some embodiments, the particles have an average particle size from about 5 nm to about 100 nm (claim group 2), and in further embodiments, the particles have an average particle size from about 5 nm to about 50 nm (claim group 3). (Specification, for example, page 30, lines 1-19. Figs. 11, 12, 15, and 16, for example.). In some embodiments, the metal vanadium oxide is crystalline. (Specification, for example, page 32, lines 10-14. Figs. 9-12, for example. Claim group 5).

Some of the pending claims relate to methods for forming metal vanadium oxide particles. (Independent claim 10. Claim group 4.) In the claimed methods, the metal vanadium oxide particles are formed by heating a mixture of vanadium oxide particles with a non-vanadium metal compound. (Specification, for example, page 26, line 29 to page 27, line 10. Figs. 6 and 7, for example.) The **reactant** vanadium oxide particles have an average particle size less than a micron. (Specification, for example, page 27, lines 11-22. Fig. 16, for example.) Applicants' specification describes the formation of submicron vanadium oxide particles using a process called laser pyrolysis. (Specification, for example, page 4, lines 26-33 and Example 1. Fig. 1, for example.). Through the description of the laser pyrolysis approach, Applicants' specification enables the formation of the starting materials for the formation of submicron metal vanadium oxide materials. (Specification, for example, page 5, lines 1-18 and page 6, lines 18-27. Figs. 1-6, for example.) The present application does not claim the formation of particles with laser pyrolysis.

Additional claims are directed to batteries formed with submicron metal vanadium oxide particles. (Independent claim 17. Claim group 1.) In particular, metal vanadium oxide particles are useful as cathode materials, especially for lithium-based batteries. (Specification, for example, page

34, line 14-page 36, line 24. Fig. 8, for example.) The submicron character of the metal vanadium oxide particles can contribute improved performance in battery applications. (Specification, for example, page 34, line 14-page 36, line 24. Fig. 8, for example.)

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. The rejection of claims 1 and 17 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,512,214 to Koksbang.

B. The rejection of claims 1, 2, 17, 24, and 26 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,549,880 to Koksbang

C. The rejection of claims 1-3, 10, 22, and 24-29 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,556,738 to Takamuki et al.

ARGUMENT

The following argument is organized around the following grouping of claims, which is summarized for the convenience of the Board.

1. Claims 1, 17, 22, 24 and 26 are within a first claim group directed to a collection of metal vanadium oxide particles or batteries formed with metal vanadium oxide particles with the particles having a specified average particles size.

2. Claim 2 is in a second claim group directed to a collection of metal vanadium oxide particles with an average diameter from about 5 nm to about 100 nm.

3. Claim 3 is in a third claim group directed to a collection of metal vanadium oxide particles with an average diameter from about 5 nm to about 50 nm.

4. Claims 10 and 25 are within a fourth claim group directed to a method for producing metal vanadium oxide particles using vanadium oxide particles with a specified average particle size range.

5. Claims 27-29 are within a fifth claim group directed to crystalline metal vanadium oxide.

LEGAL AUTHORITY

The Court of Appeals for the Federal Circuit has exclusive appellate jurisdiction for cases arising under the patent law under 28 U.S.C. § 1295 (a)(1). The Federal Circuit has adopted as binding precedent all holdings of its predecessor courts, the U.S. Court of Claims and the U.S. Court of Customs and Patent Appeals. South Corp. v. U.S., 215 USPQ 657 (Fed. Cir. 1982). Therefore, unless they have been overruled en banc, CCPA cases are binding precedent for the present appeal.

A. ANTICIPATION

1. A Single Reference Must Disclose Every Element Set Forth In a Claim To Anticipate The Claim

"For a prior art reference to anticipate in terms of 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference. **These elements must be arranged as in the claim under review**, but this is not an 'ipsissimis verbis' test." In re Bond, 15 USPQ2d 1566, 1567 (Fed. Cir, 1990)(Internal citations omitted and emphasis added.).

"If the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if that element is 'inherent' in its disclosure. To establish

inherency, the intrinsic evidence 'must make it clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" In re Robertson, 49 USPQ2d 1949, 1950, 1951 (Fed. Cir. 1999), citing Continental Can Co. v. Monsanto Co., 20 USPQ2d 1746, 1749 (Fed. Cir. 1991).

"Every element of the claimed invention must be literally present, arranged as in the claim. **The identical invention must be shown in as complete detail as is contained in the patent claim.**" Richardson v. U.S. Suzuki Motor Corp., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)(Internal citations omitted, and emphasis added.). "Here, as well, anticipation is **not** shown by a prior art disclosure which is only 'substantially the same' as the claimed invention." Jamesbury Corp. v. Litton Industrial Products, Inc., 225 USPQ 253, 256 (Fed. Cir. 1985)(emphasis added).

2. Ranges

Claims covering a range of composition narrower than a broader range covered in the prior art are not anticipated, although they may be obvious over the prior art. In re Malagari, 182 USPQ 549, 553 (CCPA 1974). Such claims are analogous to the claim of a species or subgenus within a genus, which may be patentable and generally are not obvious. "Anticipation requires a showing that each limitation of a claim is found in a single reference, either expressly or inherently. It is well established that the disclosure of a genus in the prior art is not necessarily a disclosure of every species that is a member of that genus. There may be many species encompassed within a genus that are not disclosed by a mere disclosure of the genus. On the other hand, a very small genus can be a disclosure of each species within the genus." Atofina v. Great Lakes Chem. Corp, 441 F.3d 991, 999, 78 USPQ2d 1417, 1423 (Fed. Cir. 2006).

A prima facie case of obviousness exists if the claimed ranges "overlap or lie inside ranges disclosed by prior art." In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990); In re Geisler, 116 F.3d 1465, 1469-71, 43 USPQ2d 1362, 1365-66 (Fed. Cir. 1997). If the claimed ranges do not overlap with the prior art ranges, a prima facie case of obviousness exists if they are so close that one skilled in the art would have expected them to have the same properties. "[A] prior art reference that discloses a range encompassing a somewhat narrower claimed range is sufficient to establish a prima facie case of obviousness." In re Peterson, 315 F.3d 1325, 1330, 65 USPQ2d 1379, 1382-83 (Fed. Cir. 2003). See also In re Harris, 409 F.3d 1339, 74 USPQ2d 1951 (Fed. Cir. 2005). Based on a fact intensive inquiry, a range may be disclosed in multiple prior art references instead of a single prior art reference. Iron Grip Barbell Co., Inc. v. USA Sports, Inc., 392 F.3d 1317, 1322, 73 USPQ2d 1225, 1228 (Fed. Cir. 2004).

B. OBVIOUSNESS

1. The Examiner Bears The Burden Of Demonstrating Obviousness.

The Applicants note that the patent office has the burden of persuasion in showing that the Applicants are not entitled to a patent. "[T]he conclusion of obviousness vel non is based on the preponderance of evidence and argument in the record." In re Oetiker, 24 USPQ2d 1443, 1445